

What is claimed is:

1. A device adapter that interconnects a host computer and a main storage, the device adapter including a cache storage interface device for accessing a cache storage, a main storage interface device for accessing the main storage via a network, and a cache controller that processes a data output request made by the host computer, the cache controller including:

a processing unit that caches, in the cache storage, data retrieved from the main storage;

a processing unit that manages use and allocation of storage regions of the cache storage;

a processing unit that manages load and performance information relating to the main storage and the cache storage;

a processing unit that determines whether or not the requested data is cached; and

a processing unit that determines, when the requested data is cached, which of the cache storage and the main storage to use as the storage from which the requested data will be retrieved.

2. The device adapter of claim 1, wherein the caching processing unit does not cache the retrieved data in the cache storage in a case where the retrieved data has already been cached in the cache storage or where the data transfer bandwidth of the cache storage interface device exceeds a preset threshold.

3. The device adapter of claim 1, wherein  
the load information is the present data transfer rate of the main storage interface device and/or the cache storage interface device, and  
the processing unit determining the storage from which the requested data will be retrieved determines the storage with reference to the present data transfer rate.

4. The device adapter of claim 1, wherein  
the performance information is the average request processing time of the main storage interface device and/or the cache storage interface device, and  
the processing unit determining the storage from which the requested data will be retrieved determines the storage with reference to the average request processing time.

5. The device adapter of claim 1, wherein the main storage interface device includes an interface that is different from that of the cache storage interface device.

6. The device adapter of claim 3, wherein the main storage interface device includes a fiber channel interface.

7. The device adapter of claim 3, wherein the cache storage interface device includes an SCSI interface.

8. The device adapter of claim 1, wherein the cache controller further includes a cache storage region allocation processing unit.

9. The device adapter of claim 8, wherein the cache storage region allocation processing unit selects and replaces data that is to be replaced when the region of the cache storage cannot be used.

10. The device adapter of claim 1, wherein the processing unit judging whether or not the requested data is cached uses a disk sector number for the determination.